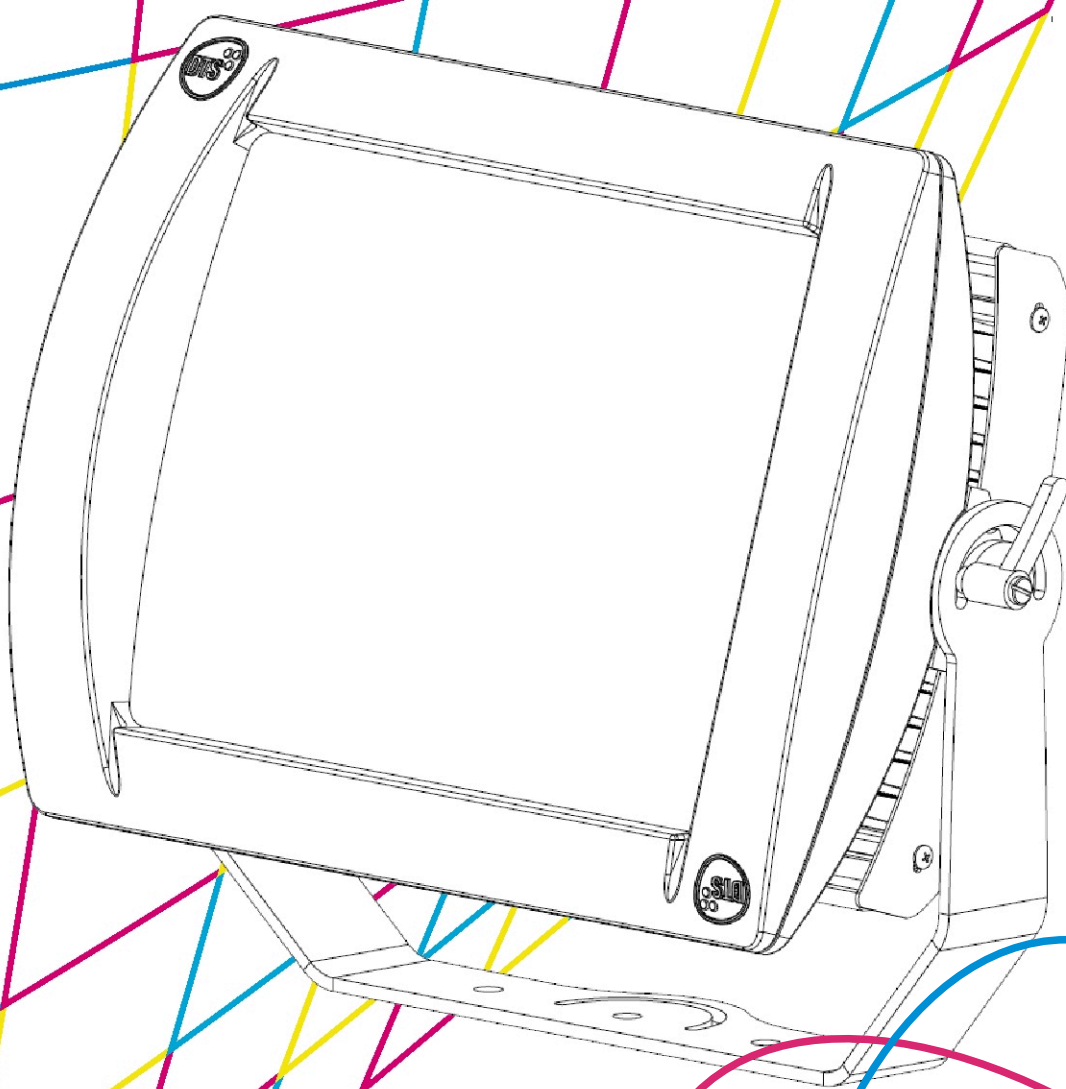


DELTA 12 HEAD



User's Manual rel 1.2 **GB**

D.T.S. Illuminazione srl - ITALY
<http://www.dts-lighting.it>



The Lighting Company

Made in Italy

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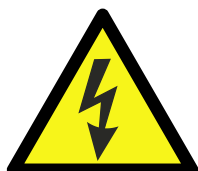
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1- SYMBOLS

Graphic symbols used on this manual:



THIS SYMBOL INDICATES A HOT SURFACE



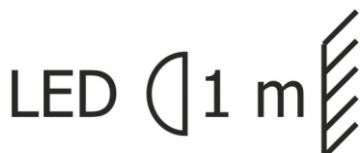
THIS SYMBOL INDICATES ELECTRIC SHOCK



THIS SYMBOL INDICATES GENERAL RISK



THIS SYMBOL MEANS YOU CAN PLACE THE UNIT ON NORMALLY FLAMMABLE SURFACES



THIS SYMBOL INDICATES THE MINIMUM DISTANCE TO BE KEPT BETWEEN THE DEVICE AND THE LIT OBJECT



THIS SYMBOL INDICATES THE EUROPEAN COMMUNITY DIRECTIVE 2002/96/EC ON WASTE ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE)

2- GENERAL WARNING

Read the instruction contained in this user manual carefully, as they give important information regarding safety during installation, use and maintenance.

The device is not for domestic use and must be installed by a qualified electrician or experienced person. The device must always be equipped with an efficient ground connection.

3- GENERAL WARRANTY CONDITIONS

The unit is guaranteed for 36 months from the date of purchase against manufacturing material defects.

4- TECHNICAL FEATURES

D.T.S. Product codes:

03.LDF008.F08	DELTA 12 HEAD FC *Ultra-Narrow lenses
03.LDF008.F12	DELTA 12 HEAD FC *Narrow lenses
03.LDF008.F25	DELTA 12 HEAD FC *Medium flood lenses
03.LDF008.F45	DELTA 12 HEAD FC *Wide flood lenses
03.LDF008.FW08	DELTA 12 HEAD CT *Ultra-Narrow lenses
03.LDF008.FW12	DELTA 12 HEAD CT *Narrow lenses
03.LDF008.FW25	DELTA 12 HEAD CT *Medium flood lenses
03.LDF008.FW45	DELTA 12 HEAD CT *Wide flood lenses

LED technology

DELTA 12 FC: 48 x FULL RGBW LEDs; 22.050 Lux at 5 m (Ultra-Narrow lenses); 17.728 Lumens; CRI > 90
 DELTA 12 CT: 48 x FULL WHITE LEDs; 31.972 Lux at 5 m (Ultra-Narrow lenses); 25.700 Lumens; CRI > 90

Colour temperature range: 2700°K - 6500°K

Optical group

Four interchangeable lenses sets available: Ultra-Narrow; Narrow; Medium flood and Wide flood
 8 additional (optional) holographic filters available (user interchangeable): 10° / 20° / 30° / 40° / 60° / 80° / 60° x 10° / 75° x 45°

User interface

4 digit 7 segments display + 4 soft keys (located into the PSU box)
 Independent operation
 Fully programmable via built-in user interface
 Master or Slave capability (chains of up to 32 interconnected units)

Control

RDM
 USITT DMX 512 serial digital protocol (reception / transmission)
 10 DMX channels

Protection

IP65 protection level

PSU

Full-range AC 90-260 V / 50-60 Hz
 Power consumption: 500W

Thermal

Operating ambient temperature: -10° / 40°

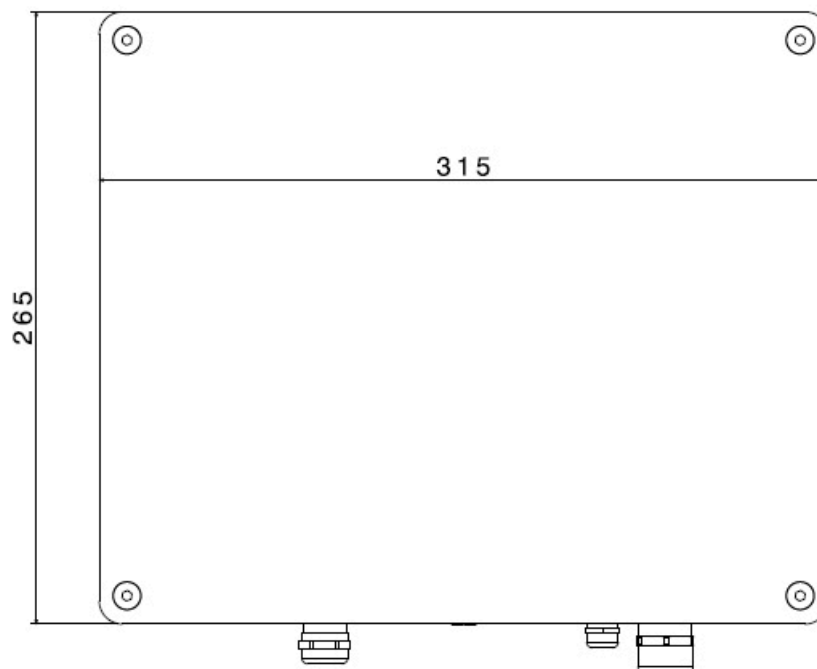
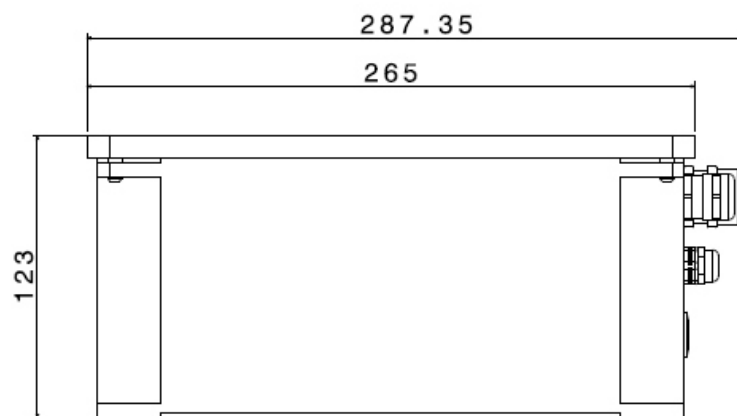
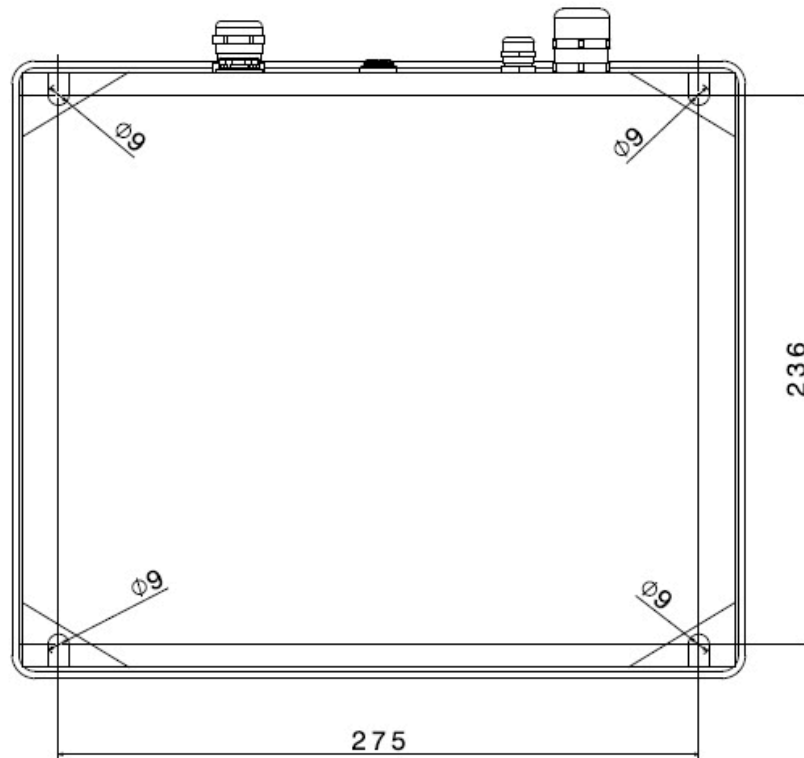
Weight

9 Kg

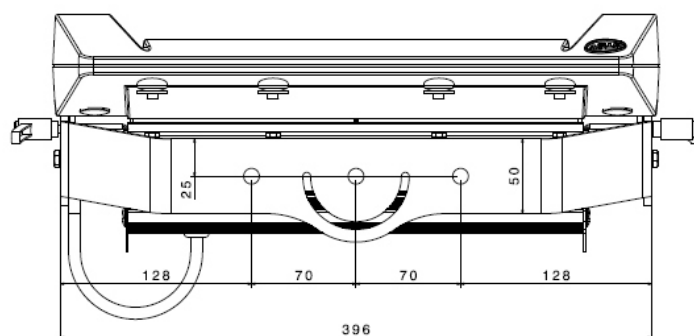
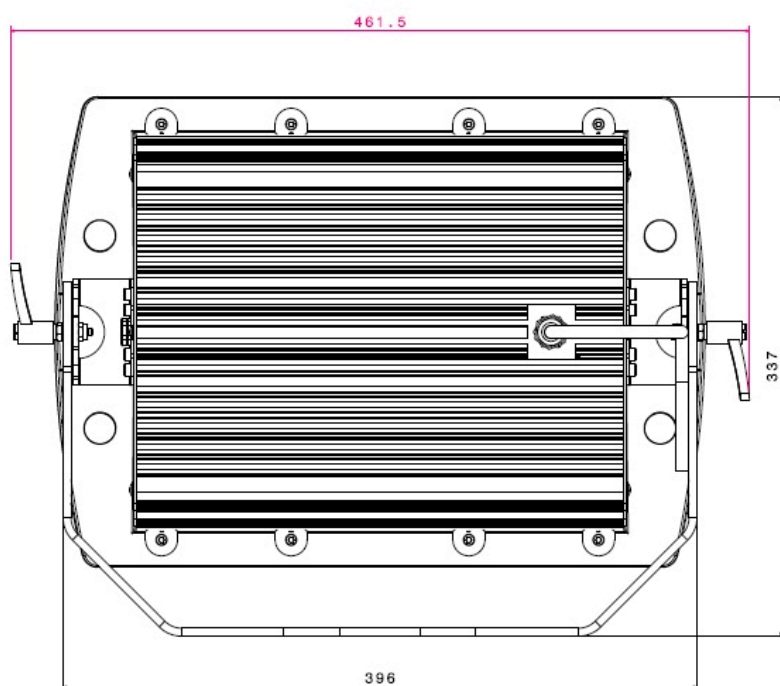
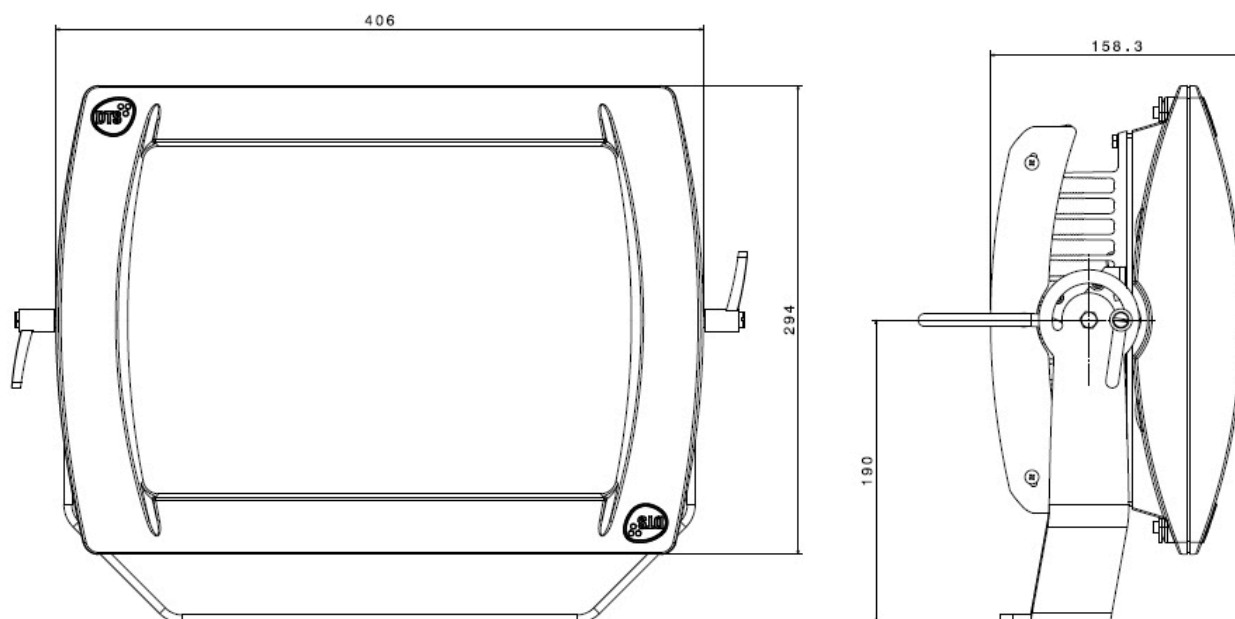
Certifications and safety

CE certification; LED class: Class 2 LED product

PSU BOX DIMENSIONS



DELTA 12 HEAD DIMENSIONS



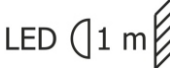
5- ACCESSORIES

Optional (on request)

- Lenses set Ultra-Narrow (D.T.S. Code: 03.LK.130)
- Lenses set Narrow (D.T.S. Code: 03.LK.127)
- Lenses set Medium flood (D.T.S. Code: 03.LK.128)
- Lenses set Wide flood (D.T.S. Code: 03.LK.129)
- Diffusion Frost Glass (Code: 0506V022.F)
- "C" Clamp G60 black (max. load 50Kg) (Code: 0521A004)
- Safety wire (3mm x 60 cm), ring spring catch, max. capacity load 60Kg (Code: 0521A010)

6- IMPORTANT SAFETY INFORMATION

6.1 Fire prevention:

- It is permissible to place the unit on normally flammable surfaces. 
- Suitable for mounting on normally flammable materials surfaces greater than 200°C with some combustion time lag.
- Minimum distance from the closest illuminable surface: 1 m. 
- Replace any blown or damaged fuses only with those of identical value (6,3A T). Refer to the wiring diagrams if there is any doubt.
- Connect the PSU to mains power via a thermal magnetic circuit breaker.

6.2 Prevention of electric shock:



- High voltage is present inside the PSU. Isolate the PSU from the mains supply prior to performing any function which involves touching the inside of the box.
- The level of technology inherent in the DELTA 12 HEAD requires the assistance of specialised personnel for all servicing. Please refer to an authorised D.T.S. service centre.
- A good earth connection is essential for proper functioning of the projector. Never connect the unit without proper earth connection.
- The fixture should be located in places with a good air ventilation.

6.3 Protection against direct light radiation:

- Never turn the unit on if any of the lenses or the glass lenses protection is damaged.
- Never look directly the LEDs when they are on.

6.4 Safety:



- The projector should always be installed with bolts, clamps and other tools that are capable of supporting the weight of the unit.
- Always use a second safety chain to sustain the weight of the unit in case of the failure of the main fixing point.
- The external surface of the unit, at various points, may exceed 80°C. 
- Never handle the unit until it's on.
- Never install the fixture in an enclosed area lacking sufficient air flow.
- The ambient temperature should not exceed 40°C.

6.5 Level of protection against the penetration of solid and liquid matter:



- The projector and the PSU are classified as an outdoor appliances and their protection level against the penetration of solid and liquid matter is IP 65.

6.6 Waste Electrical and Electronic Equipment (WEEE) directive:



The machine, accessories and packaging should be sorted for environmental-friendly recycling. For EC countries: according to the European Directive 2002/96/EC for Waste Electrical and Electronic Equipment and its implementation into national right, luminaires that are no longer usable must be collected separately and disposed of in an environmentally correct manner.

7- VOLTAGE AND FREQUENCY:

DELTA 12 HEAD with PSU can operates at 90-260V AC , 50 or 60 Hz.

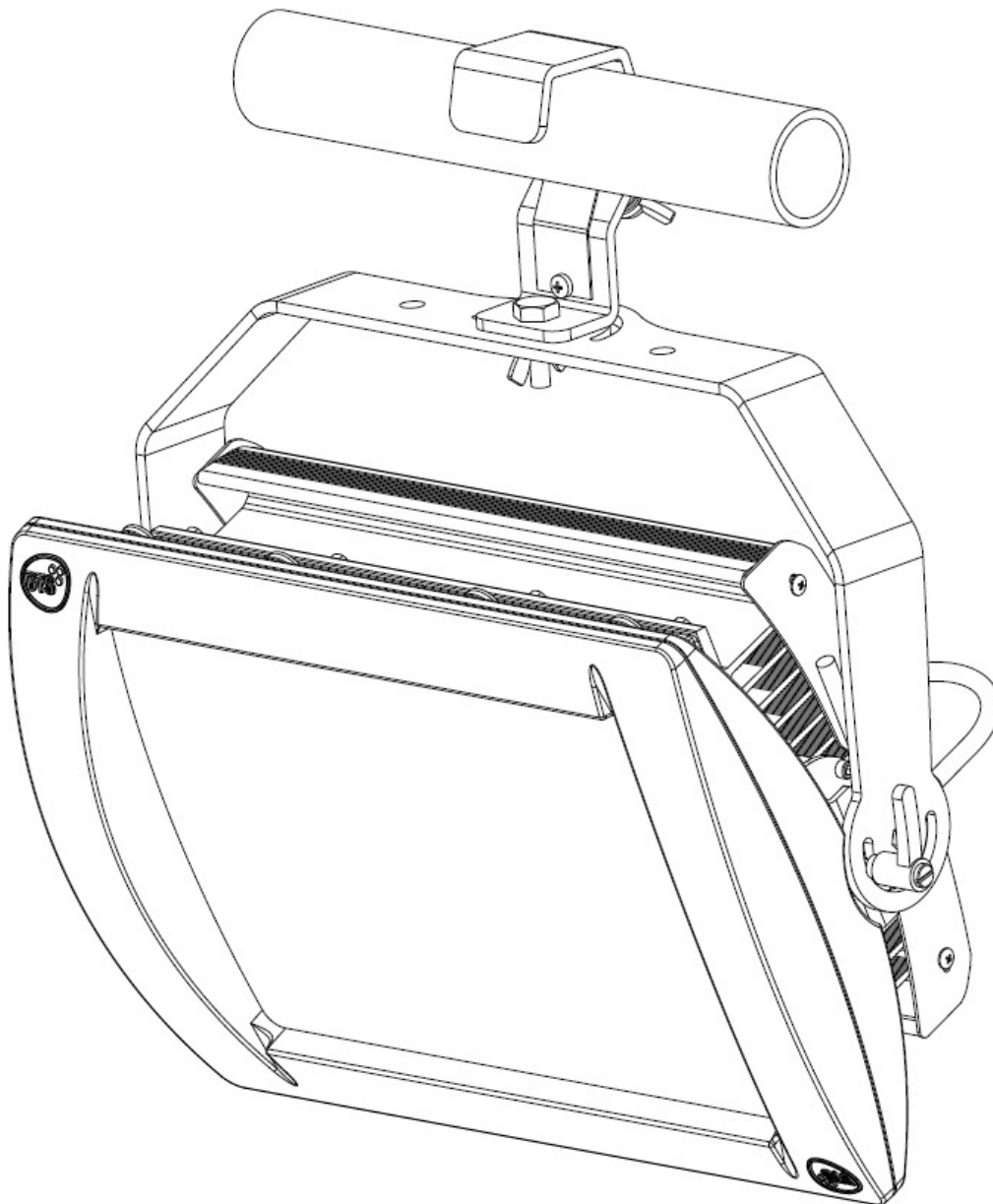
8- INSTALLATION

DELTA 12 HEAD may be ceiling mounted.

We recommend the use of appropriate clamps to fix the unit to the mounting surface.

The supporting structure from which the unit is hung should be capable of bearing the weight of the unit, as should any clamps used to hang it.

Fixing clamps for truss are not included into the unit box.



8.1 Safety cable:



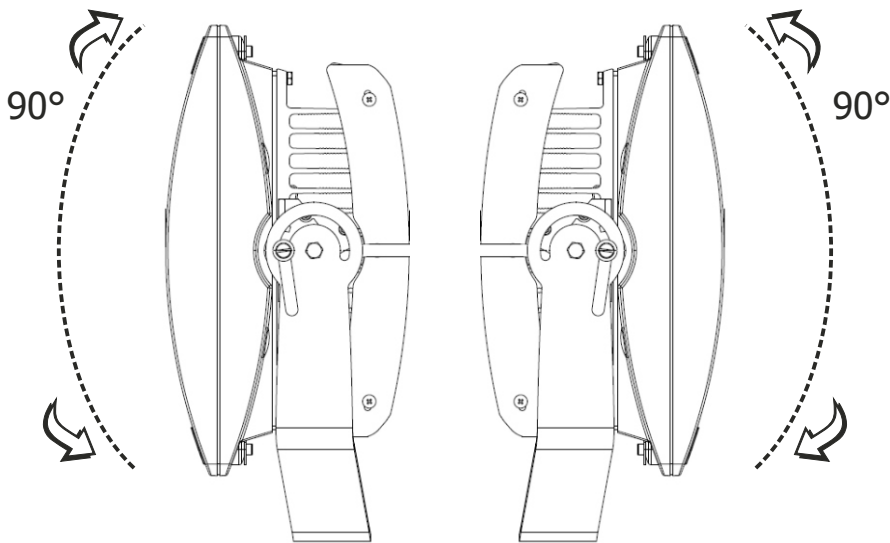
We recommend the use of a safety cable or chain connected to the DELTA 12 HEAD and to the suspension truss in order to avoid the fixture accidentally falling should the main fixing point fail. Make sure that the iron cable or chain can bear the weight of the entire unit.

8.2- Protection against liquids

If IP 65 protection is impaired for any reason, do not expose this product to external atmospheric agents, because it could be damaged.

8.3- Movement

The projector has a maximum movement of 90° for Tilt.
Do not place any obstructions in the path of the projector's movement.



WARNING

Do not place any object in the path of the projector's movement

8.4- Risk of fire

Each fixture produces heat and must be installed in a well-ventilated place.

It is permissible to place the unit on normally flammable materials surfaces greater than 200°C with some combustion time lag.

Minimum distance from the object being illuminated is 1 m. LED 1 m



8.5- Forced ventilation

You can reduce the noise level, if needed, by setting the internal fans to minimum speed or completely eliminate the noise by turning the fans Off (see page 16). The projector always works safely, thanks to a built-in thermal protection that automatically dims LED power in case the temperature of the LED Panel exceeds 70°C .

8.6- Ambient temperature

The projector should never be installed in places that lack a constant air flow. The ambient temperature should not exceed 40°C.

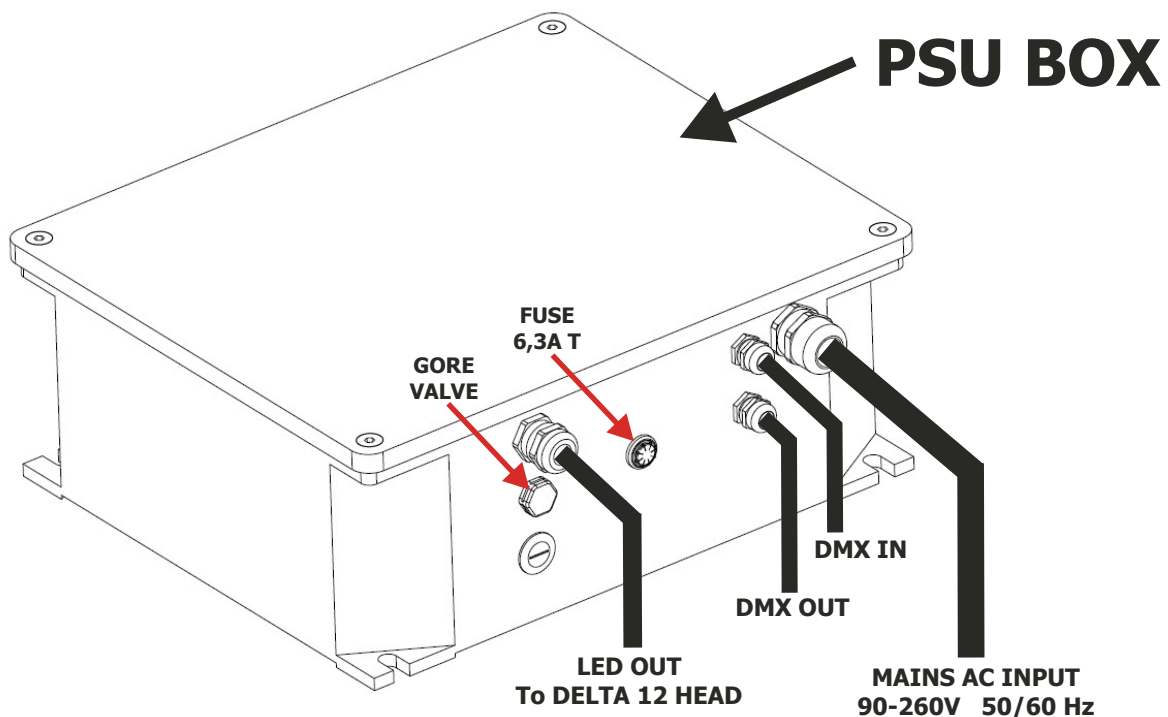
9- MAINS CONNECTION:

DELTA 12 HEAD with PSU can operates at 90-260 V AC / 50 or 60 Hz.

Prior to connecting the PSU to your mains supply, ensure that the model in your possession correctly matches the mains supply available.

For connection purposes, ensure that your plug can support 6 amps at 110V and 3 amps at 230V each unit connected.

Strict adherence to regulatory norms is strongly recommended.



9.1 Protection:

The use of a thermal magnetic circuit breaker is recommended for each DELTA 12 HEAD PSU. A good earth connection is essential for the correct operation of the projector.



10- DMX SIGNAL CONNECTION

The unit operates using the digital DMX 512 (1990) signal. Connection between the mixer and the PSU BOX or between PSU BOXs must be carried out using a two pair screened $\varnothing$ 0.5 mm cable and a XLR 5 or 3 pins connector. Ensure that the conductors do not touch each other.

Do not connect the cable ground to the XLR chassy.

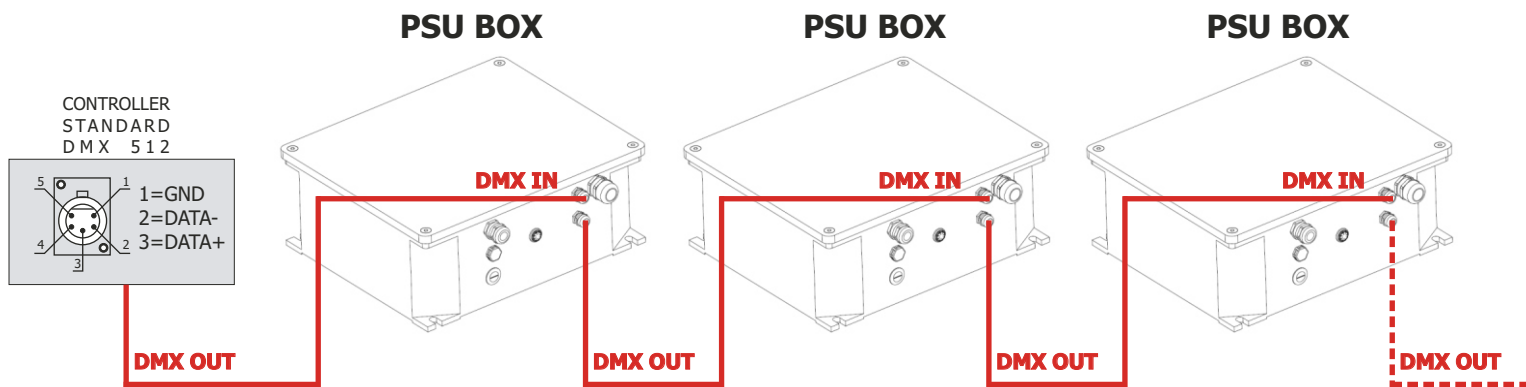
The plug housing must be isolated.

Connect the mixer signal to the DMX IN plug of the PSU BOX and connect it to the next PSU BOX by connecting the DMX OUT plug on the first PSU BOX to the DMX IN plug of the second one.

This way, all the projectors are cascade connected.

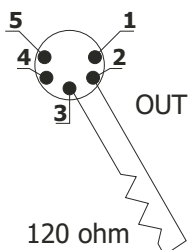
NB. If the display showing the DMX address flashes, then one of the following errors has occurred:

- DMX signal not present
- DMX address not valid
- DMX reception problem

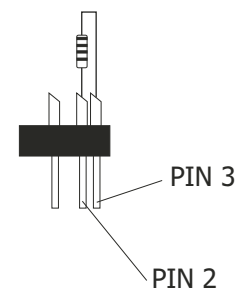


For Installations where long distance DMX cable connections are needed, we suggest to use a DMX terminator.

The DMX terminator is a male XLR 3-5 pins connector with a 120 ohm resistor between pin 2 and 3. The DMX terminator must be plugged into the last unit (DMX out panel connector) of the DMX line.



PLACE A 120 OHM RESISTOR BETWEEN PIN 2 AND 3 OF A MALE XLR CONNECTOR AND PLUG IT INTO THE DMX OUT PANEL CONNECTOR OF THE LAST UNIT CONNECTED TO THE DMX LINE



Please note that the XLR connectors installed on the DELTA 12 HEAD PSU BOX have an IP20 protection rate.

Thus, for any application where an IP65 rate is needed, the XLR connectors must be protected within an IP65-rated container.



10.1 DMX Addresses:

DELTA 12 HEAD can be used in 3 different DMX modes: 10 DMX control channels, 6 DMX control channels or 15 DMX control channels.

Here below is described the DMX channels addressing for the controller when DELTA 12 HEAD is set to 10 DMX control channels (default):

Projector 1	A001	
Projector 2	A011	If you want to select the next projector, just add "10"
Projector 3	A021	
.....	A....	
projector 6	A051	

10.2 Selecting the DMX address:

1) Press the UP-DOWN key until you reach the required DMX address.

The numbers on the display will start to flash (but the new DMX address hasn't yet been set).

2) Press ENTER to confirm your selection. The numbers on the display will stop flashing and the projector is now controlled by the new DMX address.

TIPS: if you keep pushed the UP or DOWN keys, the channels are calculated more quickly and you get a faster selection.

11- FIRMWARE UPDATING

To update the software version of the DELTA 12 HEAD you need:

- D.T.S. RED BOX interface (D.T.S. Code: 03.LA.008)
- USB-DMX Driver for the D.T.S. RED BOX interface
- "D.T.S. Firmware upgrade utility" program installed on PC
- Latest firmware release available for DELTA 12 HEAD unit

Updating the software version.

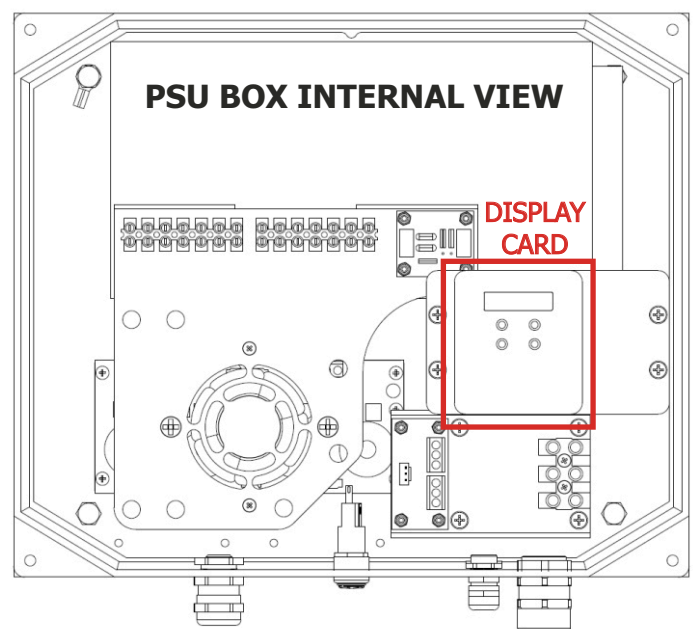
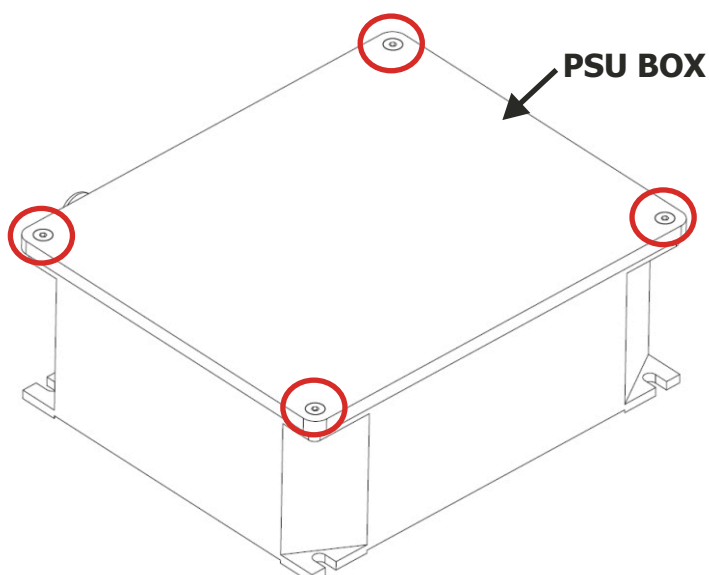
Please follow the procedure below to perform the update:

1. Install the D.T.S. RED BOX USB-DMX driver on the PC you will use to update the unit software.
2. Connect the D.T.S. RED BOX interface to the PC by using a USB cable.
3. Connect the D.T.S. RED BOX interface to the fixture by using a DMX cable.
4. Send the new software version into the unit by using "D.T.S. Firmware upgrade utility" program.

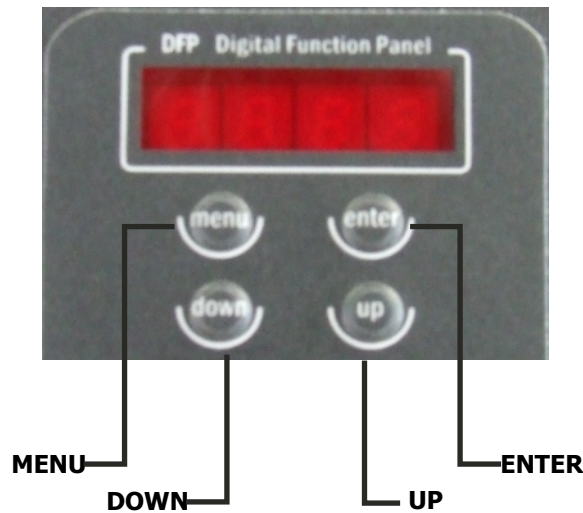
12- ACCESS TO DISPLAY CARD

The display card is located into the PSU Box.

Loose the 4 marked screws fixing the top cover which close the PSU box in order to access to the display card as showed in the picture below.



13- DISPLAY FUNCTIONS



DISPLAY FUNCTIONS

The DELTA 12 HEAD display panel shows all the available functions. Using these functions, it is possible to change some of the parameters and add some functions. Changing the D.T.S. setting can vary the functions of the unit so that it does not respond to the DMX 512 signal used to control it. Carefully follow the instructions below before carrying out any variations or selections. NOTE: the symbol shows which key has to be pushed to obtain the desired function.

Software version 2.25

ADD 1	MENU Up-Down	DISP	ENTER Up-Down	POS 1	ENTER Up-Down	AA	Floor position	ENTER
REVERSE DISPLAY Reverses display's reading depending on the mounting position (on the ground or suspended).			Up-Down	Stby	ENTER Up-Down	XX	Suspension position	ENTER
DISPLAY STAND BY To turn off the display (after 5 seconds) Or leave it always on.						off	Display OFF	ENTER
						on	Display always ON	ENTER
MODE	MENU Up-Down	10CH	ENTER Up-Down	10 CHANNELS	ENTER	Default		
DMX MODE To select DMX mode: 10 ch (Default), 6 ch, 15 ch and MACRO mode		6CH	Up-Down	6 CHANNELS	ENTER			
MACRO MACRO Function, enable channel mapping macro rainbow effects STD (default)		15CH	Up-Down	15 CHANNELS	ENTER			
		NACr	Up-Down		ENTER Up-Down	Std	No rainbow macros (Default)	ENTER
						Ext	Rainbow macros activated	ENTER



LED



rEd



nIn

Default = 0



LED

RGBA Min/Max, Smooth, Compression,
Sync level values settings and Boost mode

RGBA MINIMUM VALUES

This menu allows to select the
minimum levels for Red, Green,
Blue and White



GrEE



nIn

Default = 0



RGBA MAXIMUM VALUES

This menu allows to select the
maximum levels for Red, Green,
Blue and White



bLUE



nIn

Default = 0



These settings have priority on
Master Dimmer (DMX channel 2)



ANbr



nIn

Default = 0



SMOOTH VALUE

This menu allows to select the
value of the delay (in milliseconds)
for RGBW and Dimmer channels
reaction to DMX or Program
variation.

Off = 25 ms delay (Fast response)
20 = 250 ms delay (Slow response)



SntH



4

Range = Off - 20
Default = 4



COMPRESSION

This menu allows to select between
Linear current output or Quadratic
current output for LEDs
Default = Linear



CONP



Li nE

Linear = Linear
current output



SYNC

This menu allows to adjust the
PWM frequency value (Hz) in order
to reduce flickering in the process
of your camera recordings



54nc



610

Range = 610 Hz -10 KHz
Default = 610 Hz



BOOST DRIVING

This menu allows to increase the
LED's current from 350 mA to 500
mA



b5t



On

With BOOST active, the LED's
current is setted to 500 mA
(30% more gain).
Default = Enabled



OFF



AUTO



SUR-E



Up-Down

ChPr



SPEE



00 10



AUTOMATIC MODE

Automatic demo game without
DMX controller

ChPr

Chase with 16 steps previously
created in REC MODE
Speed and Wait time selectable
by user

CUPr

RGBW values selectable by user

Rainbow (rAIn)

Rainbow colours effect.
Speed time selectable by user

CU01-CU16

Color Macros as on DMX channel
8 (Macro)

CUPr



rEd



120



GrEE

255

bLUE

104

ANbr

104

rAIn



SPEE



00 10



CU01



Up-Down



CU02

CU16

**AUTOMATIC MODE**

Automatic demo game without DMX controller

WHITE MACROS

16 macros for White colour from 2700°K to 6500°K

DIMMER

Dimmer level selectable by user as on DMX channel 2 (Dimmer)
Dimmer level is active for all the programs and macros

SHUTTER

Shutter level selectable by user as on DMX channel 1 (Shutter)
Shutter level is active only for CU01/CU16 and Wh01/Wh16 macros

ESC

Esc from Automatic Mode Menu

UHO 1

UHO 2

UHO 3

UHO 4

UHO 5

UH.....

UH 16

dinn

ENTER Up-Down

255

ENTER

SHUT

ENTER Up-Down

255

ENTER

ESC

**REC MODE**

In DMX Recorder Mode, it is possible to create and store the scenes of the ChPr by using an external DMX controller.
The unit must be set to 10 DMX channels mode

r00 1

r00 1

r00 2

r0.....

r0 16

DMX Recorder Mode

For the programming of ChPr by using a DMX controller, besides the 10 channels necessary to control the unit a further 3 DMX channels are needed.

So that in RECORDER mode (via DMX) the unit will need 13 channels to be correctly programmed.

The three new DMX channels are:

DMX channel 11 = SCENES channel

From 0-10 = no function (r001)

From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 12 = EDIT channel:

-From 0-19 = no function

-From 20-234 the unit runs the configuration given by the received input DMX values.

With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.

-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.

With the channel REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel

Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded). It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed.



SLAU



SURE



SLU



ESC

SLAVE MODE

Slave mode for ChPr program.
All slave units will be
synchronised with master unit,
running their own Chpr program.



UDNH



SEL



On

WIRELESS DMX SYSTEM
ENABLED**WIRELESS DMX**

Wireless DMX enabled / disabled.

OFF

WIRELESS DMX SYSTEM
DISABLED

Not implemented on DELTA 12 HEAD.

UnLH



UNLINK = LOG OUT

Wireless DMX system on DELTA 12 HEAD is not available.



ENER



SEL



On



EMERGENCY

Emergency operating mode.
By setting Emergency mode, it
will be possible to select one of
the 16 pre-programmed WHITE
cues that will then ran if DMX
signal is missing or not available.
Usefull for Emergency EXIT
illumination on public areas.

OFF



Default = OFF

WHITE



Default = White 1

dim



Default = 255



DFSE



SURE



DEFAULT

To restore default settings



TEMP



027.0

TEMPERATURE

Unit temperature



FAN



24



FAN

Fan max speed regulation

Off (fan always off) -12-14-16-18-20-22-24 Volt

**FAN OFF or set from 12V to 24V = Unit thermally
protected with automatic LED power dimming in
case temperature of the LED panel exceed 70°C .**



LIFE



red



LIFE TIME

This menu show the total unit life time
and the RGBW life time

GREEN

BLUE

Ambr

Unit



TEST



Not yet activated

TEST MODE

RGBW colours test with rainbow



SOFT



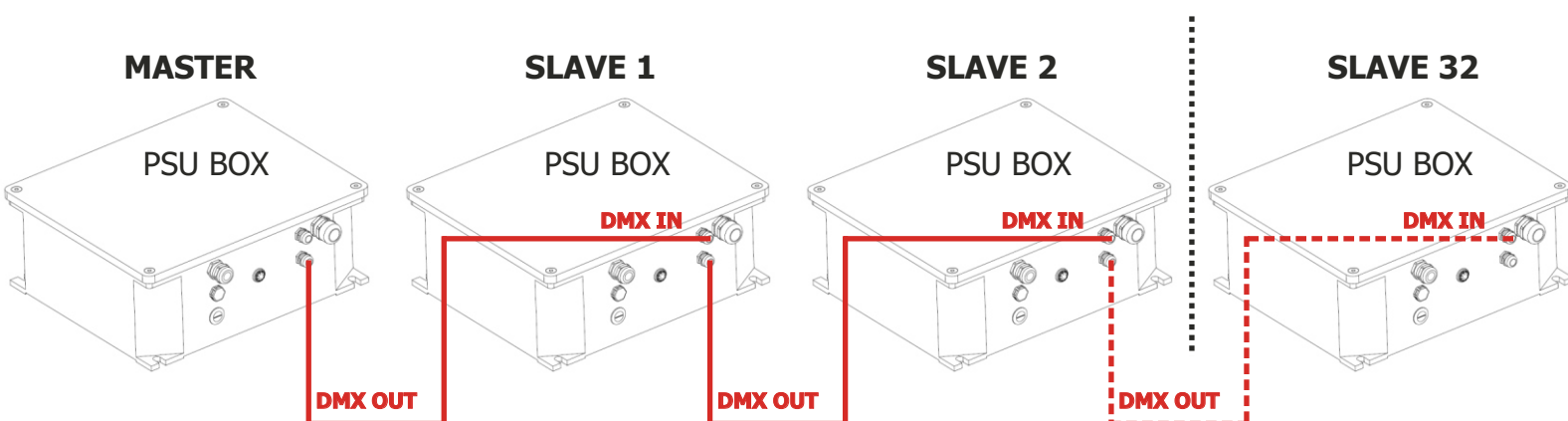
V.2.20

SOFTWARE

Software version

14-AUTOMATIC OPERATION (AUTO)

DELTA 12 HEAD can work in automatic mode without a DMX controller. First of all connect the PSU Boxes with a DMX cable (picture below). A maximum quantity of 32 slave units can be connected to the same Master unit.



To activate Auto mode on the first unit, use the menu to run through the different modes until AUTO appears on the display, and press enter.

Now it is possible to choose between the different pre-programmed games (CUPr-RAIn-CU01/CU16-Wh01/Wh16) or ChPr which is user programmable through REC mode. To confirm game activation press ENTER on the selected GAME.

14.1 CUPr-RAIn-CU01/CU16-Wh01/Wh16

The first unit that will work as a Master should be placed in Automatic mode (AUTO), the other units have to be placed in 10 channels DMX mode (MODE 10CH) and the DMX address should be set at A001. For RaIn (rainbow) game it is possible to select the speed for the colour changing (SPEE).

DIMMER function (in AUTOMATIC MODE) is active for all the programs.

SHUTTER function (in AUTOMATIC MODE) is active only for CU01/CU16 and Wh01/Wh16 macros.

14.2 ChPr MASTER/SLAVE

The first unit that will function as a Master must be set to Automatic mode (AUTO), the other units must be set to Slave mode (SLAV), selectable through the menu. In this way all the Slave units will be synchronised with the master and running their own ChPr game.

On the master unit it is possible to vary the Speed time (SPEE) for the colour changing and the Wait time (UAIt) between the steps.

Speed time and Wait time on the Master, have priority on the slave units.

NB: It is possible to run GA.Pr on the other units even though these do not have GA.Pr programmed.

You can do this by setting the units to 10 channels DMX mode (MODE 10CH) and selecting DMX address A001.

14.3 Rec mode

It is possible to program your own game on DELTA 12 HEAD that will then run it in AUTO mode (ChPr). Each unit can have its own programmed game.

In REC mode the unit must be set to 10 DMX channels mode.

To program the ChPr by using a DMX controller, you need 3 more channels in addition to the 10 channels necessary to control the unit.

So that in RECORDER mode (via DMX) the unit will need 13 DMX channels to be correctly programmed. The three new DMX channels are:

DMX channel 11 = SCENES channel

From 0-10 = no function (r001)

From 11-255 are displayed the programmable scenes (max 16 scenes from M001 to M0016)

DMX channel 12 = EDIT channel:

-From 0-19 = no function

-From 20-234 the unit runs the configuration given by the received input DMX values.

With the channel SCENES it is possible to pass from one step to the next while with REC it is possible to record the selected scene.

-From 235-255 the unit runs the configuration given by the received input DMX values closing the sequence as last scene.

With the channel REC it is possible to record the selected scene as last scene.

DMX channel 13 = RECORDING channel

Records the set scene with a variation between 0 to 255 (the display flashes indicating that the scene has been recorded). It is advised that you keep the REC channel set to 0 and to run through the 255 only once you have decided to save the scene. If ChPr is not closed, by indicating the last scene (Edit channel between 235-255), in playback mode all 16 scenes will be played through even if not programmed.

15- PERIODIC CLEANING

Front lenses Glass:

The dust can reduce the luminous output substantially. Regularly clean the front lenses glass using a soft cotton cloth, dampened with a specialist glasses cleaning solution.

16- PERIODIC CONTROLS

Mechanical parts:

Periodically check all mechanical parts and the gaskets. Please refer to an authorised D.T.S. Service centre for any operation involving of the unit if needed.

Electrical components:

Check for unit correct earthing. Please refer to an authorised D.T.S. Service centre for any operation involving of the unit if needed.

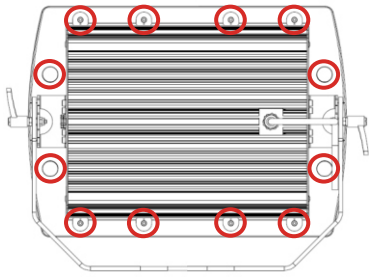
Fuse replacement:

Locate the fuse, which protect the electronics, in the PSU BOX of the DELTA 12 HEAD. 
Using a multimeter, test the condition of the fuse, replacing it with one of equivalent type (6,3A T) if necessary.

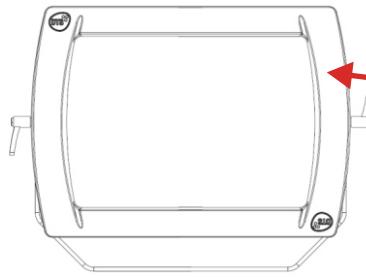
Attention: Disconnect mains power prior to remove the fuse to be tested.



17- REPLACING THE LENSES



1



2

1- Remove the 12 screws caps and the 12 screws that fix the head frontal screen

2- Remove the head frontal screen

Attention: The lenses replacement must be made by D.T.S. Personnel or experienced person. Wrong operations can damage the IP 65 protection.

3

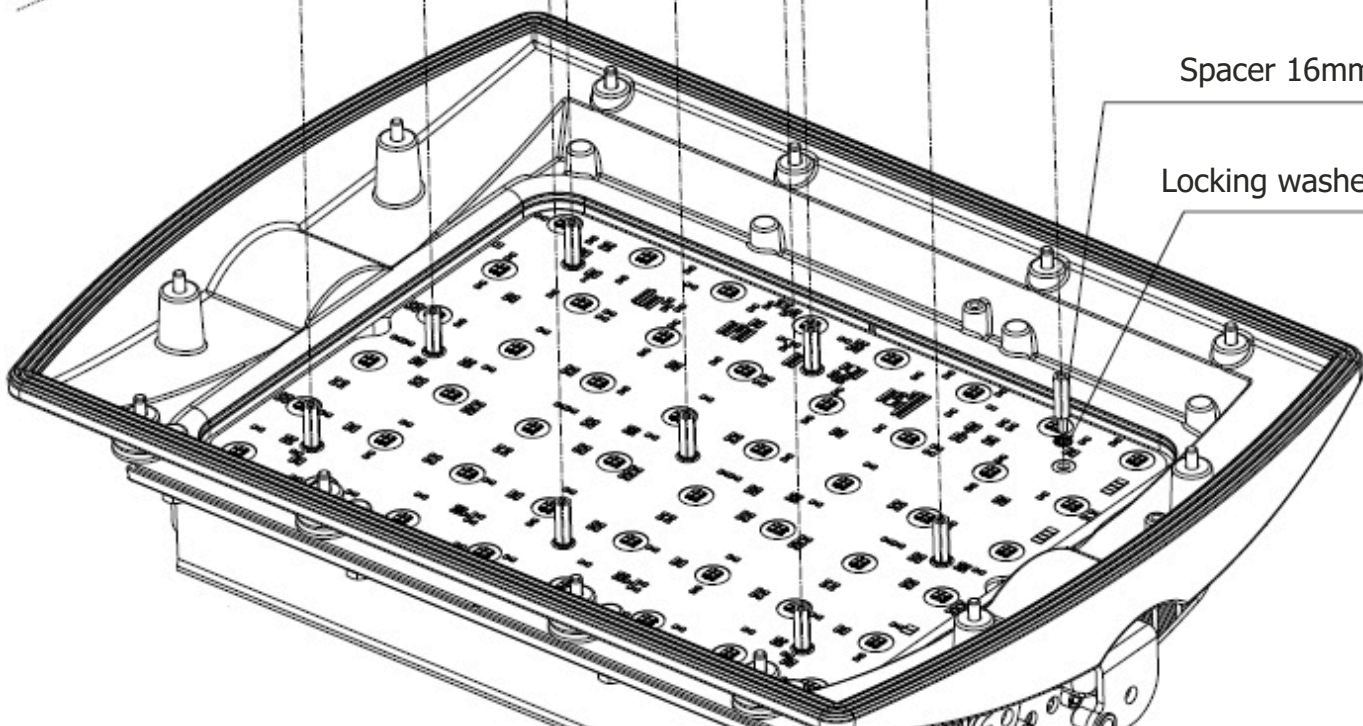
- Lenses set Ultra-Narrow (Code 03.LK.130)
- Lenses set Narrow (Code 03.LK.127)
- Lenses set Wide flood (Code 03.LK.129)

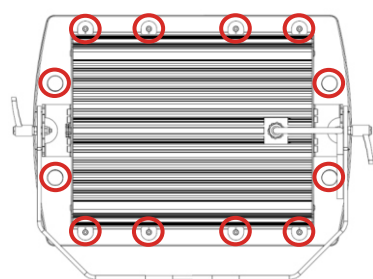
M3 x 8mm button head screw

3- Loose these 9 screws and remove the old lenses set, then apply the new one and tighten the screws Previously removed.

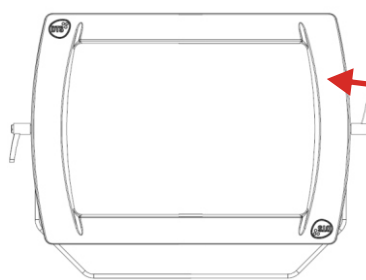
Spacer 16mm length

Locking washer 3mm diam.





1



2

1- Remove the 12 screws caps and the 12 screws that fix the head frontal screen

2- Remove the head frontal screen

Attention: The lenses replacement must be made by D.T.S. Personnel or experienced person. Wrong operations can damage the IP 65 protection.

Lenses set Medium flood (Code 03.LK.128)

M3 x 12mm countersunk screw

3

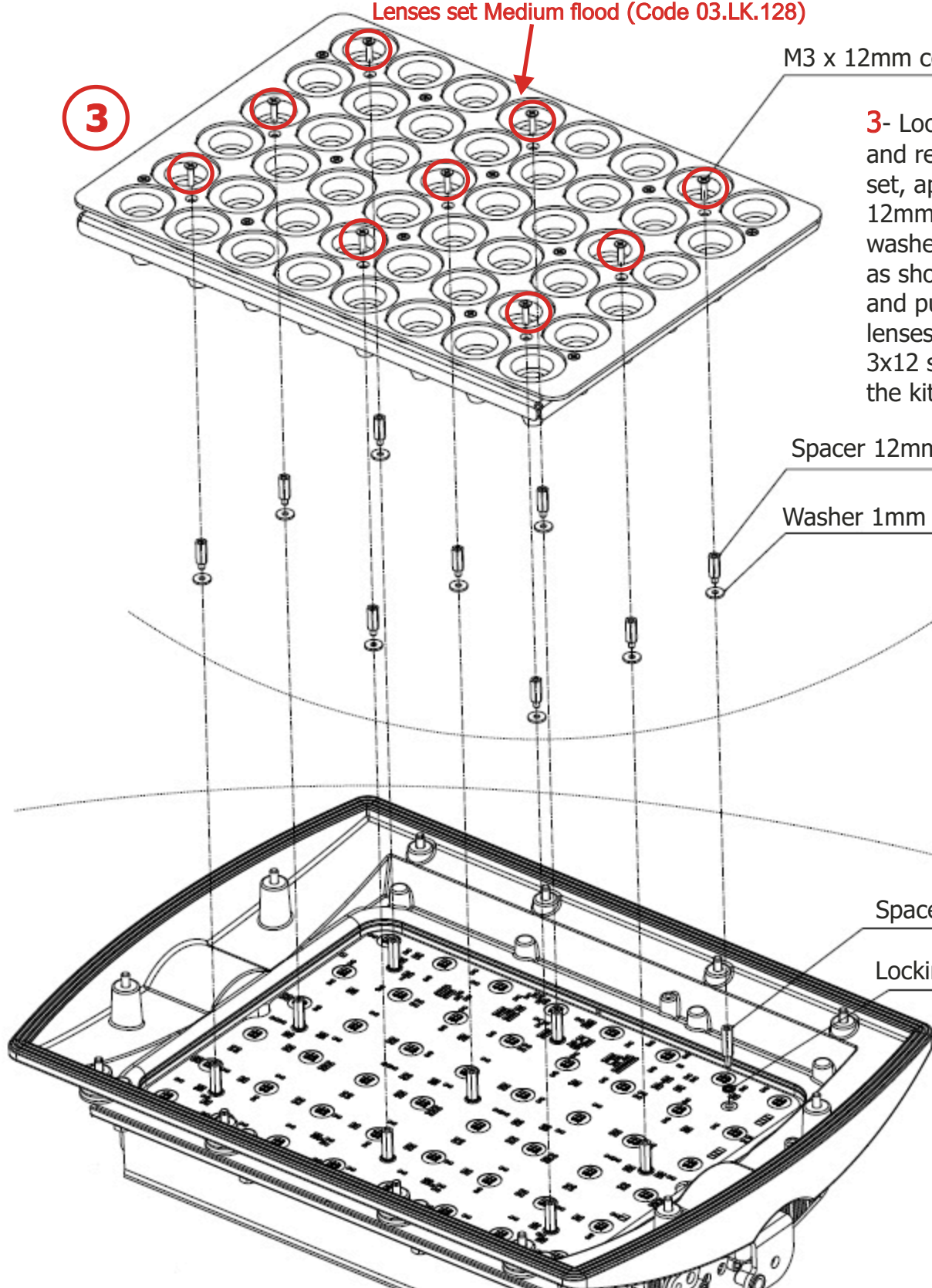
3- Loose these 9 screws and remove the old lenses set, apply the 9 spacers 12mm length and the 9 washers provided in the kit as showed in the picture and put in place the new lenses set. Put in place the 3x12 screws provided in the kit and tighten them.

Spacer 12mm length

Washer 1mm thickness

Spacer 16mm length

Locking washer 3mm diam.



18-DMX PROTOCOL

DELTA 12 FC

10 CHANNELS MODE (Default)

- 1 SHUTTER**
- 2 DIMMER**
- 3 RED**
- 4 GREEN**
- 5 BLUE**
- 6 WHITE**
- 7 WHITE (Pre-programmed whites at different colour temperatures)**
- 8 CTC**
- 9 COLOURS MACRO**
- 10 FUNCTIONS**

DMX CHANNEL	1	Parameter: SHUTTER
-------------	----------	---------------------------

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	5				Black-out
10-19	14				Open
20-29	24				Black-out
30-119					Strobe at variable speed from slow to fast (3,27 s - 30 ms)
120-149					Pulse open at variable speed from slow to fast (42,6 s - 120 ms)
150-179					Pulse close at variable speed from slow to fast (42,6 s - 120 ms)
180-204	192				Random Strobe (Master and RGBW active)
205-229	218				Random Strobe (Full)
230-255	240				Open

DMX CHANNEL	2	Parameter: DIMMER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	3	Parameter: RED
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	4	Parameter: GREEN
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	5	Parameter: BLUE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	6	Parameter: WHITE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	7	Parameter: WHITE (Pre-programmed White at diff. color temperature)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-55	23				No Function
56-105	80				Full (Red-Green-Blue-White at Full)
106-155	130				White DTS

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)

156-205	180	Custom White Recall			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)

156-205	180	Custom White Create (RGBW levels selectable by DMX)			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

DMX CHANNEL	8	Parameter: CTC (Colour temperature correction)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
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IF CHANNEL 7 (White) = WHITE CTC (Dmx range value 206 - 255)

0-255	43 colour temp. Correction Macros: 0= 2700°K / 128= 4500°K / 255= 6500°K				
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IF CHANNEL 7 (White) = NO FUNCTION (Dmx range value 0 - 43)

0-255	Smooth RGBW linear Hue correction				
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DMX CHANNEL	9	Parameter: COLOUR MACROS
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-29					Macro 1
30-44					Macro 2
45-59					Macro 3
60-74					Macro 4
75-89					Macro 5
90-104					Macro 6
105-119					Macro 7
120-134					Macro 8
135-149					Macro 9
150-164					Macro 10
165-179					Macro 11
180-194					Macro 12
195-209					Macro 13
210-225					Macro 14
226-239					Macro 15
240-255					Macro 16

DMX CHANNEL	9	Parameter: COLOUR MACROS
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-22					Macro 1
23-30					Macro 2
31-38					Macro 3
39-46					Macro 4
47-54					Macro 5
55-62					Macro 6
63-70					Macro 7
71-78					Macro 8
79-86					Macro 9
87-94					Macro 10
95-102					Macro 11
103-110					Macro 12
111-118					Macro 13
119-126					Macro 14
127-134					Macro 15
135-142					Macro 16
143-150					Rainbow Speed 1 (1 Sec.)
151-158					Rainbow Speed 2 (5 Sec.)
159-166					Rainbow Speed 3 (10 Sec.)
167-174					Rainbow Speed 4 (20 Sec.)
175-182					Rainbow Speed 5 (30 Sec.)
183-190					Rainbow Speed 6 (60 Sec.)
191-198					Rainbow Speed 7 (120 Sec.)
199-206					Rainbow Speed 8 (180 Sec.)
207-214					Random Speed 1 (0.5 sec.)
215-222					Random Speed 2 (1 Sec.)
223-230					Random Speed 3 (2 Sec.)
231-238					Random Speed 4 (5 Sec.)
239-246					Random Speed 5 (10 Sec.)
247-255					Random Speed 6 (30 Sec.)

DMX CHANNEL	10	Parameter: FUNCTIONS (Recall, Create and Store the Custom white)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-79		Custom White Recall (Enable CH 7 for Custom white Recall)			
80-160		Custom White Create (Enable CH 7 for Custom white Creation)			
161-255		Custom White Store (Store the Custom White created)			

DELTA 12 FC

6 CHANNELS MODE

- 1 SHUTTER**
- 2 DIMMER**
- 3 RED**
- 4 GREEN**
- 5 BLUE**
- 6 WHITE**

DMX CHANNEL	1	Parameter: SHUTTER
-------------	----------	---------------------------

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	5				Black-out
10-19	14				Open
20-29	24				Black-out
30-119		Strobe at variable speed from slow to fast (3,27 s - 30 ms)			
120-149		Pulse open at variable speed from slow to fast (42,6 s - 120 ms)			
150-179		Pulse close at variable speed from slow to fast (42,6 s - 120 ms)			
180-204	192				Random Strobe (Master and RGBW active)
205-229	218				Random Strobe (Full)
230-255	240				Open

DMX CHANNEL	2	Parameter: DIMMER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	3	Parameter: RED
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	4	Parameter: GREEN
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	5	Parameter: BLUE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	6	Parameter: WHITE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DELTA 12 FC

15 CHANNELS MODE

- 1 SHUTTER**
- 2 DIMMER**
- 3 DIMMER FINE**
- 4 RED**
- 5 RED FINE**
- 6 GREEN**
- 7 GREEN FINE**
- 8 BLUE**
- 9 BLUE FINE**
- 10 WHITE**
- 11 WHITE FINE**
- 12 WHITE (Pre-programmed whites at different colour temperatures)**
- 13 CTC**
- 14 COLOURS MACRO**
- 15 FUNCTIONS**

DMX CHANNEL	1	Parameter: SHUTTER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	5				Black-out
10-19	14				Open
20-29	24				Black-out
30-119					Strobe at variable speed from slow to fast (3,27 s - 30 ms)
120-149					Pulse open at variable speed from slow to fast (42,6 s - 120 ms)
150-179					Pulse close at variable speed from slow to fast (42,6 s - 120 ms)
180-204	192				Random Strobe (Master and RGBW active)
205-229	218				Random Strobe (Full)
230-255	240				Open

DMX CHANNEL	2	Parameter: DIMMER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	3	Parameter: DIMMER FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	4	Parameter: RED
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	5	Parameter: RED FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	6	Parameter: GREEN
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	7	Parameter: GREEN FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	8	Parameter: BLUE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	9	Parameter: BLUE FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	10	Parameter: WHITE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	11	Parameter: WHITE FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	12	Parameter: WHITE (Pre-programmed White at diff. color temperature)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-55	23				No Function
56-105	80				Full (Red-Green-Blue-White at Full)
106-155	130				White DTS

IF CHANNEL 15 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)

156-205	180	Custom White Recall			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

IF CHANNEL 15 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)

156-205	180	Custom White Create (RGBW levels selectable by DMX)			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

DMX CHANNEL	13	Parameter: CTC (Colour temperature correction)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
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IF CHANNEL 12 (White) = WHITE CTC (Dmx range value 206 - 255)

0-255	43 colour temp. Correction Macros: 0= 2700°K / 128= 4500°K / 255= 6500°K				
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IF CHANNEL 12 (White) = NO FUNCTION (Dmx range value 0 - 43)

0-255	Smooth RGBW linear Hue correction				
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DMX CHANNEL	14	Parameter: COLOUR MACROS
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-29					Macro 1
30-44					Macro 2
45-59					Macro 3
60-74					Macro 4
75-89					Macro 5
90-104					Macro 6
105-119					Macro 7
120-134					Macro 8
135-149					Macro 9
150-164					Macro 10
165-179					Macro 11
180-194					Macro 12
195-209					Macro 13
210-225					Macro 14
226-239					Macro 15
240-255					Macro 16

DMX CHANNEL	14	Parameter: COLOUR MACROS
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-22					Macro 1
23-30					Macro 2
31-38					Macro 3
39-46					Macro 4
47-54					Macro 5
55-62					Macro 6
63-70					Macro 7
71-78					Macro 8
79-86					Macro 9
87-94					Macro 10
95-102					Macro 11
103-110					Macro 12
111-118					Macro 13
119-126					Macro 14
127-134					Macro 15
135-142					Macro 16
143-150					Rainbow Speed 1 (1 Sec.)
151-158					Rainbow Speed 2 (5 Sec.)
159-166					Rainbow Speed 3 (10 Sec.)
167-174					Rainbow Speed 4 (20 Sec.)
175-182					Rainbow Speed 5 (30 Sec.)
183-190					Rainbow Speed 6 (60 Sec.)
191-198					Rainbow Speed 7 (120 Sec.)
199-206					Rainbow Speed 8 (180 Sec.)
207-214					Random Speed 1 (0.5 sec.)
215-222					Random Speed 2 (1 Sec.)
223-230					Random Speed 3 (2 Sec.)
231-238					Random Speed 4 (5 Sec.)
239-246					Random Speed 5 (10 Sec.)
247-255					Random Speed 6 (30 Sec.)

DMX CHANNEL	15	Parameter: FUNCTIONS (Recall, Create and Store the Custom white)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-79		Custom White Recall (Enable CH 12 for Custom white Recall)			
80-160		Custom White Create (Enable CH 12 for Custom white Creation)			
161-255		Custom White Store (Store the Custom White created)			

18-DMX PROTOCOL

DELTA 12 CT

10 CHANNELS MODE (Default)

- 1 SHUTTER**
- 2 DIMMER**
- 3 RED = WHITE 1**
- 4 GREEN = WHITE 2**
- 5 BLUE = WHITE 3**
- 6 WHITE = WHITE 4**
- 7 WHITE (Pre-programmed whites at different colour temperatures)**
- 8 CTC**
- 9 COLOURS MACRO**
- 10 FUNCTIONS**

DMX CHANNEL	1	Parameter: SHUTTER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	5				Black-out
10-19	14				Open
20-29	24				Black-out
30-119					Strobe at variable speed from slow to fast (3,27 s - 30 ms)
120-149					Pulse open at variable speed from slow to fast (42,6 s - 120 ms)
150-179					Pulse close at variable speed from slow to fast (42,6 s - 120 ms)
180-204	192				Random Strobe (Master and RGBA active)
205-229	218				Random Strobe (Full)
230-255	240				Open

DMX CHANNEL	2	Parameter: DIMMER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	3	Parameter: RED = WHITE 1
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	4	Parameter: GREEN = WHITE 2
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	5	Parameter: BLUE = WHITE 3
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	6	Parameter: WHITE = WHITE 4
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	7	Parameter: WHITE (Pre-programmed White at diff. color temperature)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-55	23		No Function		
56-105	80		Full (White1-White2-White3-White4 at Full)		
106-155	130		White DTS		

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)

156-205	180	Custom White Recall			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

IF CHANNEL 10 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)

156-205	180	Custom White Create (RGBA levels selectable by DMX)			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

DMX CHANNEL	8	Parameter: CTC (Colour temperature correction)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
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IF CHANNEL 7 (White) = WHITE CTC (Dmx range value 206 - 255)

0-255	43 colour temp. Correction Macros: 0= 2700°K / 128= 4500°K / 255= 6500°K				
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IF CHANNEL 7 (White) = NO FUNCTION (Dmx range value 0 - 43)

0-255	Smooth RGBA linear Hue correction				
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DMX CHANNEL	9	Parameter: COLOUR MACROS
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IF:        **PLEASE CHECK PAGE 12**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-29					Macro 1
30-44					Macro 2
45-59					Macro 3
60-74					Macro 4
75-89					Macro 5
90-104					Macro 6
105-119					Macro 7
120-134					Macro 8
135-149					Macro 9
150-164					Macro 10
165-179					Macro 11
180-194					Macro 12
195-209					Macro 13
210-225					Macro 14
226-239					Macro 15
240-255					Macro 16

DMX CHANNEL	9	Parameter: COLOUR MACROS
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-22					Macro 1
23-30					Macro 2
31-38					Macro 3
39-46					Macro 4
47-54					Macro 5
55-62					Macro 6
63-70					Macro 7
71-78					Macro 8
79-86					Macro 9
87-94					Macro 10
95-102					Macro 11
103-110					Macro 12
111-118					Macro 13
119-126					Macro 14
127-134					Macro 15
135-142					Macro 16
143-150					Rainbow Speed 1 (1 Sec.)
151-158					Rainbow Speed 2 (5 Sec.)
159-166					Rainbow Speed 3 (10 Sec.)
167-174					Rainbow Speed 4 (20 Sec.)
175-182					Rainbow Speed 5 (30 Sec.)
183-190					Rainbow Speed 6 (60 Sec.)
191-198					Rainbow Speed 7 (120 Sec.)
199-206					Rainbow Speed 8 (180 Sec.)
207-214					Random Speed 1 (0.5 sec.)
215-222					Random Speed 2 (1 Sec.)
223-230					Random Speed 3 (2 Sec.)
231-238					Random Speed 4 (5 Sec.)
239-246					Random Speed 5 (10 Sec.)
247-255					Random Speed 6 (30 Sec.)

DMX CHANNEL	10	Parameter: FUNCTIONS (Recall, Create and Store the Custom white)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-79					Custom White Recall (Enable CH 7 for Custom white Recall)
80-160					Custom White Create (Enable CH 7 for Custom white Creation)
161-255					Custom White Store (Store the Custom White created)

DELTA 12 CT

6 CHANNELS MODE

- 1 SHUTTER**
- 2 DIMMER**
- 3 RED = WHITE 1**
- 4 GREEN = WHITE 2**
- 5 BLUE = WHITE 3**
- 6 WHITE = WHITE 4**

DMX CHANNEL	1	Parameter: SHUTTER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	5				Black-out
10-19	14				Open
20-29	24				Black-out
30-119		Strobe at variable speed from slow to fast (3,27 s - 30 ms)			
120-149		Pulse open at variable speed from slow to fast (42,6 s - 120 ms)			
150-179		Pulse close at variable speed from slow to fast (42,6 s - 120 ms)			
180-204	192				Random Strobe (Master and RGBA active)
205-229	218				Random Strobe (Full)
230-255	240				Open

DMX CHANNEL	2	Parameter: DIMMER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	3	Parameter: RED = WHITE 1
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	4	Parameter: GREEN = WHITE 2
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	5	Parameter: BLUE = WHITE 3
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	6	Parameter: WHITE = WHITE 4
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DELTA 12 CT

15 CHANNELS MODE

- 1 SHUTTER**
- 2 DIMMER**
- 3 DIMMER FINE**
- 4 RED = WHITE 1**
- 5 RED FINE = WHITE 1 FINE**
- 6 GREEN = WHITE 2**
- 7 GREEN FINE = WHITE 2 FINE**
- 8 BLUE = WHITE 3**
- 9 BLUE FINE = WHITE 3 FINE**
- 10 WHITE = WHITE 4**
- 11 WHITE FINE = WHITE 4 FINE**
- 12 WHITE (Pre-programmed whites at different colour temperatures)**
- 13 CTC**
- 14 COLOURS MACRO**
- 15 FUNCTIONS**

DMX CHANNEL	1	Parameter: SHUTTER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-9	5				Black-out
10-19	14				Open
20-29	24				Black-out
30-119					Strobe at variable speed from slow to fast (3,27 s - 30 ms)
120-149					Pulse open at variable speed from slow to fast (42,6 s - 120 ms)
150-179					Pulse close at variable speed from slow to fast (42,6 s - 120 ms)
180-204	192				Random Strobe (Master and RGBA active)
205-229	218				Random Strobe (Full)
230-255	240				Open

DMX CHANNEL	2	Parameter: DIMMER
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	3	Parameter: DIMMER FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional dimmer

DMX CHANNEL	4	Parameter: RED = WHITE 1
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	5	Parameter: RED FINE = WHITE 1 FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	6	Parameter: GREEN = WHITE 2
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	7	Parameter: GREEN FINE = WHITE 2 FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	8	Parameter: BLUE = WHITE 3
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	9	Parameter: BLUE FINE = WHITE 3 FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	10	Parameter: WHITE = WHITE 4
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	11	Parameter: WHITE FINE = WHITE 4 FINE
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-255					Proportional colour

DMX CHANNEL	12	Parameter: WHITE (Pre-programmed White at diff. color temperature)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-55	23				No Function
56-105	80				Full (White1-White2-White3-White4 at Full)
106-155	130				White DTS

IF CHANNEL 15 (FUNCTIONS) = CUSTOM WHITE RECALL (Dmx range value 0 - 79)

156-205	180	Custom White Recall			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

IF CHANNEL 15 (FUNCTIONS) = CUSTOM WHITE CREATE (Dmx range value 80 - 160)

156-205	180	Custom White Create (RGBA levels selectable by DMX)			
206-255	225	White CTC (Channel 8 CTC enabled 43 color temp. Correction Macros: 2700°K - 6500°K)			

DMX CHANNEL	13	Parameter: CTC (Colour temperature correction)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
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IF CHANNEL 12 (White) = WHITE CTC (Dmx range value 206 - 255)

0-255	43 colour temp. Correction Macros: 0= 2700°K / 128= 4500°K / 255= 6500°K				
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IF CHANNEL 12 (White) = NO FUNCTION (Dmx range value 0 - 43)

0-255	Smooth RGBA linear Hue correction				
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DMX CHANNEL	14	Parameter: COLOUR MACROS
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IF:        **PLEASE CHECK PAGE 12**

DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-29					Macro 1
30-44					Macro 2
45-59					Macro 3
60-74					Macro 4
75-89					Macro 5
90-104					Macro 6
105-119					Macro 7
120-134					Macro 8
135-149					Macro 9
150-164					Macro 10
165-179					Macro 11
180-194					Macro 12
195-209					Macro 13
210-225					Macro 14
226-239					Macro 15
240-255					Macro 16

DMX CHANNEL	14	Parameter: COLOUR MACROS
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PLEASE CHECK PAGE 12

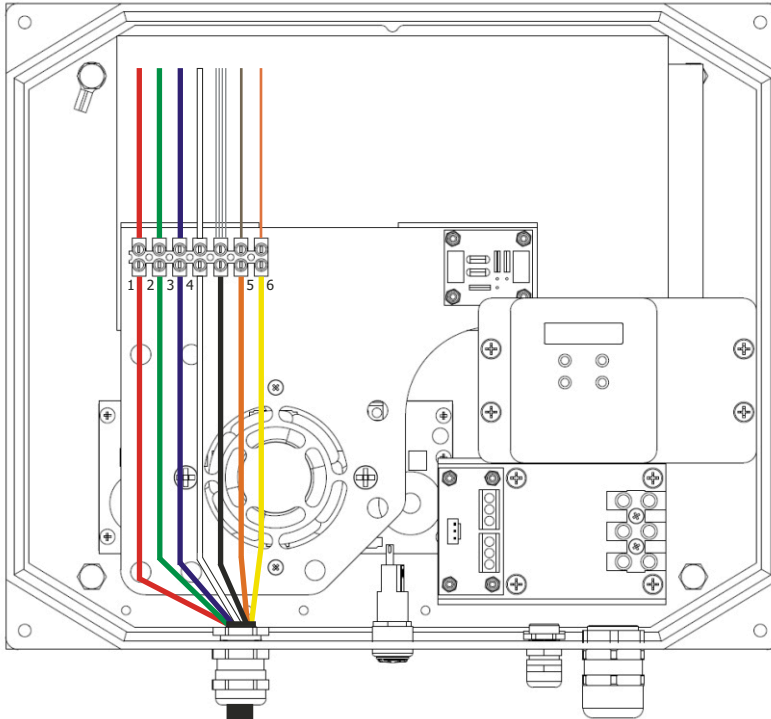
DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-14					No Function
15-22					Macro 1
23-30					Macro 2
31-38					Macro 3
39-46					Macro 4
47-54					Macro 5
55-62					Macro 6
63-70					Macro 7
71-78					Macro 8
79-86					Macro 9
87-94					Macro 10
95-102					Macro 11
103-110					Macro 12
111-118					Macro 13
119-126					Macro 14
127-134					Macro 15
135-142					Macro 16
143-150					Rainbow Speed 1 (1 Sec.)
151-158					Rainbow Speed 2 (5 Sec.)
159-166					Rainbow Speed 3 (10 Sec.)
167-174					Rainbow Speed 4 (20 Sec.)
175-182					Rainbow Speed 5 (30 Sec.)
183-190					Rainbow Speed 6 (60 Sec.)
191-198					Rainbow Speed 7 (120 Sec.)
199-206					Rainbow Speed 8 (180 Sec.)
207-214					Random Speed 1 (0.5 sec.)
215-222					Random Speed 2 (1 Sec.)
223-230					Random Speed 3 (2 Sec.)
231-238					Random Speed 4 (5 Sec.)
239-246					Random Speed 5 (10 Sec.)
247-255					Random Speed 6 (30 Sec.)

DMX CHANNEL	15	Parameter: FUNCTIONS (Recall, Create and Store the Custom white)
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DMX range Value	Mid point DMX value	Move range (degrees)	Mode	Option	Function
0-79		Custom White Recall (Enable CH 12 for Custom white Recall)			
80-160		Custom White Create (Enable CH 12 for Custom white Creation)			
161-255		Custom White Store (Store the Custom White created)			

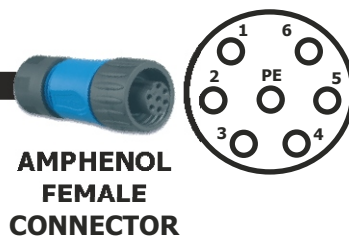
19 - AMPHENOL CABLE CONNECTOR WIRING CONNECTIONS

PSU BOX

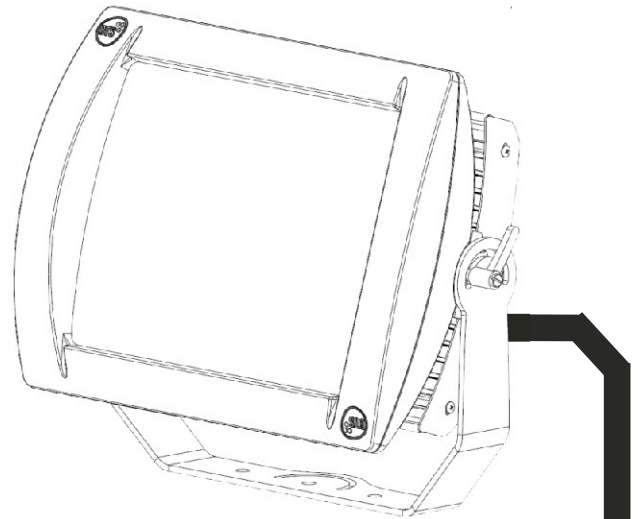


Pin 1 = Red wire
 Pin 2 = Green wire
 Pin 3 = Blue wire
 Pin 4 = White wire
 Pin 5 = Orange wire
 Pin 6 = Yellow wire

PE = Black wire



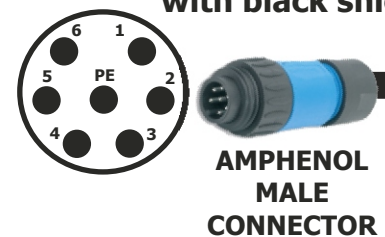
DELTA 12 HEAD



Cable M18108KV

Pin 1 = wire 1
 Pin 2 = wire 2
 Pin 3 = wire 3
 Pin 4 = wire 4
 Pin 5 = wire 5
 Pin 6 = wire 6

PE = Yellow/Green wire
 with black shield

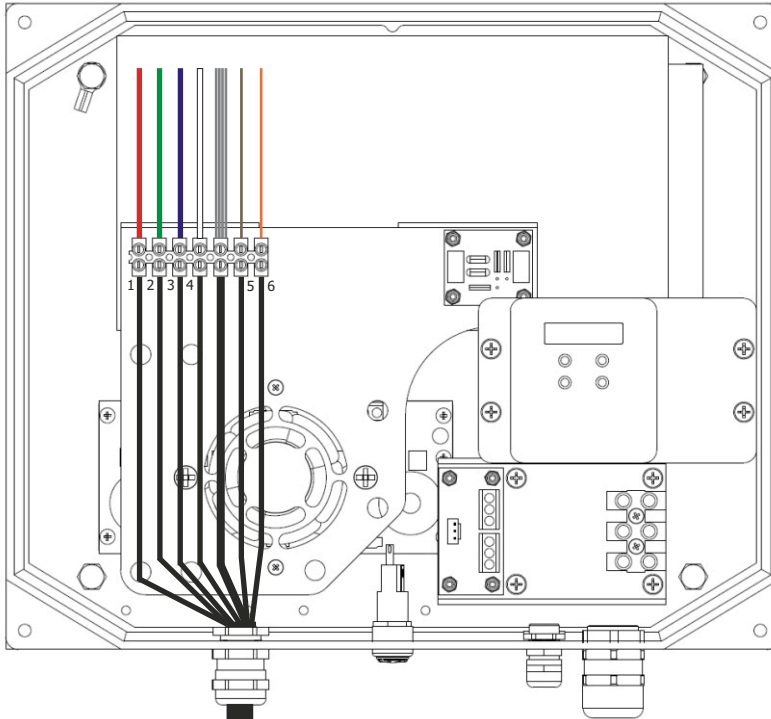


Cable 5388C

The maximum distance between the PSU BOX and the DELTA 12 HEAD should not exceed 30 meters.

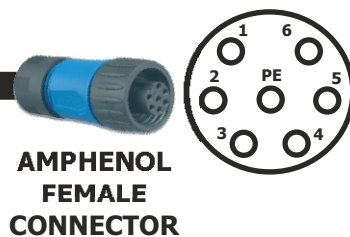
19 - AMPHENOL CABLE CONNECTOR WIRING CONNECTIONS

PSU BOX



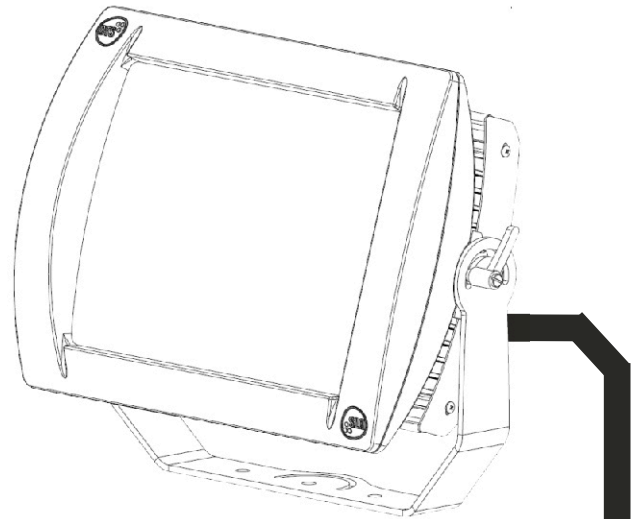
Pin 1 = wire 1
Pin 2 = wire 2
Pin 3 = wire 3
Pin 4 = wire 4
Pin 5 = wire 5
Pin 6 = wire 6

PE = Yellow/Green wire
with black shield



Cable M18108KV

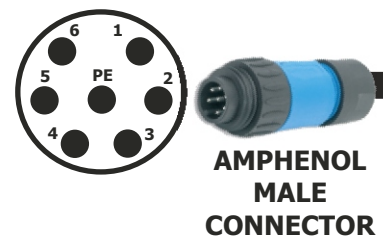
DELTA 12 HEAD



Cable M18108KV

Pin 1 = wire 1
Pin 2 = wire 2
Pin 3 = wire 3
Pin 4 = wire 4
Pin 5 = wire 5
Pin 6 = wire 6

PE = Yellow/Green wire
with black shield



**AMPHENOL
MALE
CONNECTOR**

The maximum distance between the PSU BOX and the DELTA 12 HEAD should not exceed 30 meters.

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The Lighting Company

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ISO 9001:2008 standard



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and manufactured at the D.T.S.
plants in Italy



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